

### **REMARKS**

Claims 1-21 are pending in the present application. Claims 1 and 12 have been amended and are independent. Reconsideration of this application, as amended, is respectfully requested.

#### **Rejection Under 35 U.S.C. § 103**

Claims 1-5, 7, 9-16, 18, 20 and 21 stand rejected under 35 U.S.C. § 102(e) as being anticipated by Katoh et al., U.S. Patent No. 6,173,433. Claims 6 and 17 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Katoh et al., U.S. Patent No. 6,173,433 in view of Cariffe et al., U.S. Patent No. 6,201,548. Claims 8 and 19 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Katoh et al. in view of Hernandez et al., U.S. Patent No. 4,686,522. These rejections are respectfully traversed.

The present invention is directed to a method and apparatus for creating a logical network by inserting a plurality of objects into a working area on a computer display. Independent claim 1 exemplifies the method of the present invention and recites a combination of steps including "displaying an existing network in said working area," "identifying at least one subarea of the working area where an object is validly insertable into said network," "identifying at least one type of object that can be validly inserted into the network in said subarea," "visually indicating said at least one object type in association with each indicated subarea," "receiving input from the user selecting one of said at least

one object type indicated in association with one of said at least one subarea" and "displaying an extended network where an additional object of the selected type is inserted into the selected subarea." In addition, independent claim 1 recites "said steps being performed by a computer application software fro creating a logical network."

Independent claim 12 exemplifies the apparatus of the present invention and recites a combination of elements including "means for displaying an existing network in said working area," "means for identifying at least one subarea of the working area where an object is validly insertable into said network," "means for identifying at least one type of object that can be validly inserted into the network in said subarea," "means for visually indicating said at least one subarea on the computer display," "means for visually indicating said at least one object type in association with each indicated subarea on the computer display," "means for receiving input from the user selecting one of said at least one object type indicated in association with one of said at least one subarea," and "means for displaying an extended network where an additional object of the selected type is inserted into the selected subarea." In addition, independent claim 12 recites "wherein a computer application software is used to create the logical network."

The method and apparatus of the present invention is illustrated most clearly by Figs. 4a and 4b of the present invention. Specifically, an existing network 20 is illustrated in Fig. 4a, while an extended network 20' is illustrated in Fig. 4b. Applicants respectfully submit that the references relied on by the Examiner fail to teach or suggest the presently claimed invention.

As the Examiner will note, independent claims 1 and 12 have been amended to more clearly specify that it is the computer application software that performs the steps of the method recited in independent claim 1, and it is the computer application software that is used to create the logical network as recited in independent claim 12. Applicants submit that this is an important aspect of the present invention that clearly defines the present invention over the Katoh et al. reference relied on by the Examiner. Specifically, Katoh et al. does not disclose that the computer system assists the user in selection of circuit parts. It is believed that the amendments to independent claims 1 and 12 presented by the present amendment clarify that the computer system assists the user in selection of object types. Therefore, independent claims 1 and 12 clearly define over the Katoh et al. reference for at least this reason.

Referring to the Katoh et al. reference, this reference is related to the design of optical waveguides between circuit parts. The Katoh et al. system "identifies" and displays terminals of the circuits to which waveguides can be installed. However, this is not the same as indicating and displaying subareas where an object is validly insertable, as recited in the independent claims of the present invention. It is clear from independent claims 1 and 12, and from the present specification, that a subarea is a location in the network where an object can be inserted. In order to insert a waveguide (which is the only object type discussed in Katoh et al.), TWO terminals must be indicated. Therefore, a "terminal" in Katoh cannot be regarded as equivalent to a "subarea" as recited in the independent claims of the present invention.

Furthermore, it is clear that the Katoh et al. system is incapable of automatically determining between which terminals a waveguide should be inserted. Instead, this information must come from the user, who indicates, by the use of a pointing device, between which terminals a wave guide should be inserted (e.g. column 4, lines 30-35 of Katoh et al.). Katoh et al. does not disclose any way to establish whether the terminals indicated by the user define a valid path for a waveguide.

Furthermore, an insertion of an object cannot be completed by the system in Katoh et al., as soon as the terminals have been indicated by the user. Rather, the Katoh et al. computer system only determines a propagation path between selected parts, and provides a collection of standard parts, that can be tuned by the user to realize the calculated waveguide. (Column 4, lines 30-43 and lines 57-63).

With reference to the present claim language, Katoh et al. does not disclose visually indicating at least one insertable object type in association with each indicated subarea. The Examiner makes reference to column 4, lines 35-38, and states that the Katoh et al. system generates a plurality of possible paths. This is true; however, the possible paths are not visually indicated, but are only generated as part of a process of finding the optimal path (see column 18, lines 27-32).

In addition, independent claims 1 and 12 recite that the computer application software performs the steps to create the logical network. Applicants submit that this recitation clearly defines the present invention over the Katoh et al. reference. For example, the step of "identifying at least one type of object that can be validly inserted into

the network in said subarea” is performed by the computer application software. In Katoh et al., the computer only displays the terminals. There is no disclosure in Katoh et al. of the computer identifying valid objects that can be inserted into the network. In view of the fact that this step, as well as other steps recited in independent claim 1, are not performed by the computer in Katoh et al., Applicants submit that amended claims 1 and 12 clearly define the present invention over the Katoh et al. reference relied on by the Examiner.

To summarize, Katoh et al. describes an entirely different process compared to the present invention. The purpose of the present invention is to facilitate the insertion of objects into a logical network in a correct way, e.g. resulting in a compilable control program. Katoh et al., on the other hand, is directed towards assisting a user to design optical waveguides between circuit parts, the selection and positioning of which have already been performed by the user. Furthermore, in Katoh et al., many of the steps are performed by the user. Since the present claims have been clarified that the steps are performed by the computer application software, the present claims clearly define the present invention over the Katoh et al. reference.

With regard to dependent claims 2-5, 7, 9-11, 13-16, 18, 20 and 21, Applicants respectfully submit that these claims are allowable due to their respective dependence upon allowable independent claims 1 and 12, as well as due to the additional recitations in these claims.

In view of the above, Applicants respectfully submit that the Katoh et al. reference fails to anticipate independent claims 1-5, 7, 9-16, 18, 20 and 21 of the present invention.

Reconsideration and withdrawal of the Examiner's rejection under 35 U.S.C. § 102(e) are therefore respectfully requested.

With regard to the Examiner's reliance on the Cariffe et al. reference and the Hernandez et al. reference, these references have been relied on to disclose graphically outlining a subarea and changing the appearance of a cursor, respectively. There is no disclosure in either of the Cariffe et al. or Hernandez et al. references of "displaying an extended network where an additional object of the type that is indicated in association with the selected subarea is inserted into the selected subarea" as recited in independent claims 1 and 12 of the present invention. Accordingly, these references fail to make up for the deficiencies of Katoh et al.

It should be noted that the Examiner references the Wright reference on page 6, paragraph 14 of the Examiner's Office Action. However, the Examiner does not mention the Wright reference in the statement of the rejection. **It is believed that the inclusion of the Wright reference is a typographical error; however, clarification is requested.**

In view of the above remarks, Applicants respectfully submit that claims 1-21 clearly define the present invention over the references relied on by the Examiner. Accordingly, reconsideration and withdrawal of the Examiner's rejections under 35 U.S.C. §§ 102 and 103 are respectfully requested.

### CONCLUSION

All the stated grounds of rejection have been properly traversed and/or rendered moot. Applicants therefore respectfully request that the Examiner reconsider all presently pending rejections and that they be withdrawn.

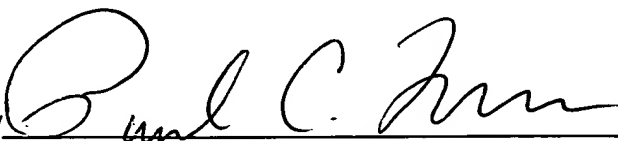
It is believed that a full and complete response has been made to the Office Action, and that as such, the Examiner is respectfully requested to send the application to Issue.

In the event there are any matters remaining in this application, the Examiner is invited to contact Paul C. Lewis, Registration No. 43,368 at (703) 205-8000 in the Washington, D.C. area.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

Respectfully submitted,

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